



# DANVILLE SPECIFICATIONS

## BUILDING SERVICES



This list contains information from the 2016 versions of the CBC, CEC, CMC, & CPC amended by the State of California from the 2015 IBC. These codes as well as the local ordinances apply to your project if they pertain to the scope of work, effective January 1, 2017.

### CALIFORNIA BUILDING/RESIDENTIAL CODE

1. Skylights: Must meet or exceed the minimum standards for safety glazing requirements in CBC Section 2405. Unit skylights shall be tested and labeled as complying with AAMA/ WDMA/ CSA 101/I.S.2/A440.
2. Veneer: Specify the method for attachment and weather protection, including flashing and seismic requirements.
3. Emergency Escape and Rescue Openings: All basements and sleeping rooms below the fourth story shall have at least one exterior emergency escape and rescue opening. Openings shall have a minimum net clear opening of 5.7 square feet, unless the opening is a *grade-floor opening*, where the minimum net clear opening may be reduced to 5.0 square feet. Minimum net clear opening height shall be 24 inches; minimum clear opening width shall be 20 inches. Maximum height from **floor to clear opening** not to exceed 44 inches. CRC R310.1. Definition of grade floor opening: *A window or other opening located such that the sill height of the opening is not more than 44-inches above or below the finished ground level adjacent to the opening.*
4. Glazing in bathroom walls shall require tempered type glass where the bottom exposed edge of the glazing is less than 60-inches measured vertically from any standing surface, unless the glazing is more than 60-inches measured horizontally and in a straight line, from the water's edge of a bathtub, hot tub, spa, or whirlpool. CRC R308.4.5.
5. Fasteners and connectors in contact with preservative-treated wood: Fasteners, including nuts and washers, in contact with preservative-treated wood shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Plain carbon steel fasteners, including nuts and washers, in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment shall be permitted. Plain carbon steel bolts that are ½-inch or larger may be used in residential construction. CBC 2304.9.5.1, CRC R317.3.1.
6. Smoke and CO Alarms: Smoke and Carbon Monoxide alarms shall be installed in dwelling units when a permit is issued for work exceeding \$1,000 in valuation.
7. Residential Door Landings: There shall be a floor or landing on each side of each exterior door. The width of each landing shall not be less than the door served and have a minimum dimension of 36-inches measured in the direction of travel. The landing or finished floor for the required egress door shall not be more than 1.5 inches lower than the top of the threshold except on the exterior side where

the landing shall not exceed 7.75 inches below the top of the threshold provided the door does not swing over the landing or floor.

- 6A. Doors other than the required egress door shall be provided with landings or floors not more than 7.75 inches below the top of the threshold. **Exception:** A landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.
8. Appliances & Equipment: Construction drawings shall specify that installation/manufacture instructions for all listed equipment shall be provided to the field inspector at time of inspection.
9. Site Address: Indicate the location of building address numbers on the drawings building elevations. Building address numbers shall be a minimum of 4-inches in height or 3-inches if illuminated by an approved means.
10. Vaulted Ceilings/Ventilation: Provide detail(s) showing proper ventilation of enclosed ceiling cavity, or alternate method, e.g. spray foam insulation system.
11. Handrails/Residential: Provide handrails on at least one side of each continuous run of treads or flight with four or more stair risers. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34-inches or more than 38-inches. Handrails shall be continuous for the full length of the flight of stairs and have a space of not less than 1.5 inches between the wall and the handrails. CRC R311.7.8.
12. Guards: Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings that are located more than 30-inches measured vertically to the floor or grade below at any point within 36-inches horizontally to the edge of the open side. Minimum guard height shall be 42-inches high above the adjacent walking surfaces. Insect screening shall not be considered as a guard.
13. Kitchens shall have a clear passageway of not less than 3 feet between counter fronts and appliances or counter fronts and walls. CBC 1208.1.
14. Crawl spaces shall be provided with a minimum of one access opening not less than 18 inches by 24 inches. CBC 1209.1.
15. Attic access openings shall be not less than 20 inches by 30 inches for attic areas having a clear height of over 30 inches. Clear headroom of not less than 30-inches shall be provided in the attic space at or above the access opening. CBC 1209.2. (See Mechanical section for minimum opening size for equipment access).
16. Residential Stairs: Minimum riser height for stairs is 4 inches, maximum riser height is 7 ¾ inches, minimum tread length shall be 10 inches. CBC 1009.7, CRC R311.
17. Residential Tub/Showers: Water resistant gypsum (greenboard) is not permitted for use as a base for tile in tub/shower walls or ceilings. Fiber-cement, fiber-mat reinforced cementitious backer units, glass mat gypsum backers or fiber-reinforced gypsum backers in compliance with ASTM C 1288, C

1325, C 1178 or C 1278, respectively, and installed in accordance with manufacturers' recommendations shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas. CRC R702.4.2.

## CALIFORNIA ELECTRICAL CODE

1. Wiring methods and materials shall be installed in accordance with Chapter 3, Article 300 of the 2013 CEC.
2. Dwelling unit receptacle outlets shall be installed so that no point measured horizontally along the floor line of any wall space is more than 6 feet from a receptacle outlet. Floor receptacles may be counted as part of the required number of receptacle outlets only when located within 18 inches of the wall. CEC 210.52 (A) (1) & (3).
3. All 125-volt, single-phase, 15- and 20- ampere receptacles installed in the following locations shall have ground-fault circuit-interrupter (GFCI) protection for personnel:  
Bathrooms, Garages/Accessory buildings, Outdoors, Crawl spaces, Unfinished basements, Kitchens, Sinks, located in areas other than kitchens where receptacles are located within 6-feet of the outside edge of the sink. CEC 210.8.
4. Each residential kitchen shall require two or more 20-amp small appliance branch circuits. These branch circuits shall serve receptacles in the kitchen, pantry, breakfast room, and dining room wall and floor receptacle outlets, including all countertop outlets. All receptacles that serve the countertop shall be GFCI protected. CEC 210.52 (B) (1).
  - a. A receptacle outlet shall be installed at each wall counter space that is 12 inches or wider. No point along the countertop wall line shall be more than 24 inches measured horizontally from a receptacle outlet in that space. At least one receptacle shall be installed at each permanent island, and an additional receptacle may be required in islands with a range, sink, or other counter mounted arrangement.
5. Light fixtures within and attached to the exterior of the building are required to meet Title 24 Standards for high-efficacy, on-off operation, dimmers and occupancy sensors.
6. All luminaires and lampholders shall be listed. CEC 410.6.
7. Overcurrent devices: Panelboards and sub-panels shall be readily accessible and shall be installed so that the center of the grip of the operating handle of the switch or circuit breaker, when in its highest position, is not more than 6 ft - 7 inches above the floor or working platform. Overcurrent devices shall be located where they will not be exposed to physical damage, shall not be located in the vicinity of easily ignitable material such as in clothes closets, shall not be located in bathrooms, and shall not be located over steps of a stairway.
8. Provide a minimum of 30-inch wide by 36-inch deep working space clearance immediately in front of all panelboards, switchboards, and disconnects. This space is to be clear and extend from the grade, floor, or platform to a height of 6.5 feet or the height of the equipment, whichever is greater.

9. No parts of cord-connected luminaires, chain-, cable-, or cord-suspended luminaires, lighting track, pendants, or ceiling-suspended fans shall be located within a zone measured 3-ft horizontally and 8-ft vertically from the top of the bathtub rim or shower stall threshold. Luminaires located within the actual outside dimension of the bathtub or shower to a height of 8-ft vertically from the top of the bathtub rim or shower threshold shall be marked for damp locations, or marked for wet locations where subject to shower spray. CEC 410.10 (D).
10. All 120-volt, single phase, 15- and 20-amp branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed arc-fault circuit interrupter (AFCI), combination type, installed to provide protection of the branch circuit. CEC 210.12 (A).
11. All non-locking type, 125-volt, 15- and 20- amp dwelling unit receptacles shall be listed tamper-resistant type **except** in the following locations:  
Receptacles more than 5.5 ft. above the floor, receptacles that are part of a luminaire or appliance, a receptacle for an appliance located within a dedicated space for the appliance that, in normal use, is not easily moved; non-grounding receptacles used for replacements. CEC 406.12.
12. Receptacles for all cord-connected appliances shall be accessible.
13. All 120 volt, single phase, 15- and 20- amp branch circuits supplying outlets installed in dwelling unit bedrooms shall be protected by a listed arc-fault circuit interrupter. CEC 210.12.

## CALIFORNIA MECHANICAL AND PLUMBING CODES

1. Provide approved seismic anchorage for furnaces, air conditioning units, and water heaters.
2. All new water closets (toilets) shall have an effective flush volume not to exceed 1.28 gallons. CPC 403.2.1.
3. Listed heating and cooling equipment shall be installed per the manufacturers' installation requirements.
4. Gas utilization equipment in garages and in adjacent spaces that open to the garage shall be installed so that all ignition devices are located not less than 18 inches above the floor unless listed as flammable vapor ignition resistant.
5. Appliances in Attics and Under-Floor Spaces: An attic or under-floor space in which an appliance is installed shall be accessible through an opening and passageway not less than the largest component of the appliance, and not less than 22-inches by 30-inches.
6. Central heating furnaces may only be installed in closets located in bathrooms or bedrooms when the closet is equipped with a listed, gasketed door assembly and a listed self-closing device. The closet shall be for the exclusive use of the furnace. CMC 904.1.

7. Household cooking appliances shall have a vertical clearance above the cooktop of not less than 30 inches to combustible material or to metal cabinets. CMC 916.1.2.
8. Listed Outdoor Cooking Appliances shall be installed in accordance with their listing and the manufacturers' instructions. CMC 921.1.
9. Vent Termination and Clearance at Roof: Each vent pipe or stack shall extend through its flashing and shall terminate vertically not less than 6-inches above the roof nor less than 1-foot from a vertical surface. Each vent shall terminate not less than 10 feet from, or not less than 3 feet above, an openable window, door, opening, air intake, or vent shaft, or not less than 3 feet in every direction from a lot line, alley and street excepted. CPC 906.0.
10. Domestic Clothes Dryers: Exhaust ducts shall be of metal and shall have smooth interior surfaces, and shall not be connected with screws or fasteners that may obstruct the flow. Flexible transition ducts shall not exceed 6 feet in length and shall not be concealed within construction. The maximum length of the ducting shall be 14 feet including two 90 degree bends. A length of 2 feet shall be deducted for each 90 degree elbow in excess of two. Where a closet is designed for the installation of a clothes dryer, an opening of not less than 100 square inches for makeup air shall be provided in the door or by other means. CMC 504.3.
11. Each bathroom containing a bathtub, shower or tub/shower combination shall be mechanically ventilated for purposes of humidity control in accordance with the CMC. CRC R303.3.1.
12. Air duct exhaust from clothes dryers, bathrooms, and kitchens shall terminate at least 3 feet from the property line and 3 feet from openings into a building. CMC 504.5.
13. Hose-bibbs shall be protected with a non-removable backflow preventer. CPC 603.5.7.
14. Provide adequate combustion air for gas utilization equipment. CMC 701.0.
15. Specify size, type, and total lineal footage, for all new gas piping, including the Btu input of the appliances served.
16. The following flow rates are the maximum allowable for the following fixtures: Kitchen Faucets – 1.8 gallons per minute; Residential Lavatory Faucets – 1.5 gallons per minute; Showerheads – 2.0 gallons per minute. CPC 403.6, 403.7 & 408.2.
17. Shower and tub/shower combinations in all buildings shall be provided with individual control valves of the pressure balance, thermostatic, or combination of the two types, to provide scald and thermal shock protection. CPC 408.3.
18. Flexible ductwork in attics or under-floor areas shall be supported at manufacturer's recommended intervals, but at no greater than 4 feet on center.

If you have any questions, please contact Building Services at 925-314-3330.